

vention, and treatment. The feeling of weakness that first occurs is soon followed by nervousness, dizziness, perspiration of the forehead, marked hunger, and the sense of impending collapse. To guard against hypoglycemic reactions, patients are advised to carry sweets, candy or sugar, on their person. By taking sweets fifteen minutes after injection, and upon the slightest feeling of weakness, a reaction will be avoided. With the administration of rather large doses, reaction may occur repeatedly after several hours.

Effects.—During the first few days of treatment, no great alteration in appetite may be noted: improvement soon occurs, however, and patients with habitual anorexia consume an increased quantity of food with avidity and pleasure. After one week, several meals three or four hours apart are taken and food is often eaten between meals. The increased appetite and food intake is followed by a gain in weight of approximately two to three pounds weekly. Eating becomes a pleasure and a sense of well-being results. And in those patients previously addicted to laxatives regular defecation replaces a chronic constipation. The increase in weight does not, however, continue *ad infinitum*: for, after three to six weeks of treatment, using fairly large quantities of insulin, the body becomes refractory, and even greater quantities of insulin have no further effect. The increased weight is maintained for six to twelve months after completion of treatment, or even longer. In hyperthyroid cases the action of insulin, derived from the pancreas, can readily be explained, since the pancreas is an antagonist in action to the thyroid gland.

Failures.—The efficacy of insulin therapy is more dependent upon the susceptibility and response of the patient than upon the quantity administered. From the vast clinical experience of M. Levai about 20 per cent of cases treated as described failed to react successfully. With patience, rest and diet, seemingly refractory cases can be influenced.

Summary.—Insulin therapy is of distinct value in the malnutrition of the nondiabetic individual, whatever the causative factor may be. If the patient is properly instructed, and this advice is followed, ill effects do not occur. The treatment must certainly be individualized. And a gain in weight of two to three pounds weekly for approximately four weeks will result.

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Ear, Nose and Throat

New Theories About Common Colds.—All attempts to find a specific microorganism of common colds have met, in spite of many claims to the contrary, with failure. Newman, in an extensive bacteriologic study, has found the total number of bacterial species in colds equal to nineteen, with none of them as a specific cause. Krause demonstrated in 1914 that not only bacteria but their filtrable virus is able to produce coryza. Foster repeated and confirmed the experiments of Krause. Dochez demonstrated the

same fact on apes. These observations prove that the presence of bacteria is not a necessary factor in exciting nasal colds.

As to chilling as a cause of colds, Schade in 1919 analyzed extensive statistical material of the German army during the last war, and found that the incidence of acute respiratory diseases was four times as great among troops exposed to unfavorable weather as among the sheltered. Mudd and Grant in 1921 published their experimental observations on students with chilling of the body by electric fans, as a result of which colds in the nose and throat developed. At the same time the authors noticed that, as a result of vasoconstriction, blanching and ischemia occurred on the mucous membranes of the pharynx, accompanied by a fall of temperature thereon equal to 1.42 degrees. A few other authors (Tschalussow, Cocks, Galeotti and Jackson) made similar observations.

These experiments compel us to replace the former false assumption of congestion of the mucous membranes, due to chilling and cold, with a new conception of a stage of blanching and ischemia of same. Mudd and Grant advance a hypothesis that ischemia may play a part in inducing infection by decreasing cell respiration, by retarding removal of products of cell metabolism, by increasing or decreasing the local supply of specific antibodies, by altering the state of aggregation of the colloids of the protoplasm, or a combination of the above factors, so as to disturb the equilibrium between host and parasite and to excite infection.

The new fact that an acute nasal cold can be produced by a filtrable virus of Krause and Foster, can be explained best by the anaphylactic theory of infection.

Immunity and infection, according to this theory, rest in the ability of tissue cells to combat through their proteolytic enzymes the invasion of both bacterial and nonspecific proteins. These enter as a result of parenteral ingestion through nonresisting mucous membranes. The degree of immunity depends upon the affinity which the body cells have for protein and the ability of the amboceptors to select and appropriate from the complex protein molecule, through cleavage, that stage of aminoacid which is not only harmless, but made useful by the tissue cells themselves. Incomplete cleavage or digestion of the protein molecule sets free toxic products which result in tissue irritation and disease.

Among factors predisposing to colds, presence of nasal or pharyngeal pathology plays an important part. Persons with definite pathological conditions of the nose and pharynx are inclined to infection more often than normal individuals, because their tissue cells are less active and lack protective arrangements due to chronic inflammation. The hypertrophic condition usually associated with chronic inflammation, exposes a larger field to the action of foreign protein, thus making them always more susceptible to anaphylactic shock in the form of coryza or pharyngeal cold.

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